

REMARKS/ARGUMENTS

1. Rejection of claims 11, 19, and 33-34 under 35 U.S.C. 102(e):

Claims 11, 19, and 33-34 are rejected under 35 U.S.C. 102(e) as being anticipated by Sutardja et al (US 6,903,448, hereinafter Sutardja).

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Response:

Claims 11, 19, 33, and 34 have each been amended to patentably distinguish from Sutardja. Claims 11 and 19 now specify that the bonding pad of each bonding option unit has a corresponding first lead frame such that there exists a one-to-one correspondence between the bonding pads and the first lead frames. The one-to-one correspondence indicates that for each first lead frame, there is exactly one bonding pad, and vice-versa. In this way, the bonding pad of each bonding option unit is connected to the package substrate or the corresponding first lead frame for providing two types of bonding options for each bonding option unit. This amendment is supported in paragraphs [0022] and [0023] of the specification as well as Figure 6. No new matter is added.

On the other hand, Sutardja, does not teach that the bonding pad of each bonding option unit has a corresponding first lead frame such that there exists a one-to-one correspondence between the bonding pads and the first lead frames. As Sutardja teaches in Figure 7, numerous bonding pads are provided and are connected to lead frames 51, 52, 71, 72, 73 through wires 60, 61, 62. Sutardja teaches that the number of bonding pads is far greater than the number of lead frames 51, 52, 71, 72, 73. Therefore, Sutardja does not teach the claimed limitation of the bonding pad of each bonding option unit having a corresponding first lead frame such that there exists a one-to-one correspondence between the bonding pads and the first lead frames, as is recited in each of the independent claims 11 and 19. For these reasons, claims 11 and 19 are patentable over the cited prior art.

As to claims 33 and 34, each of these claims has been amended to specify that each bonding pad of the chip has a corresponding second lead frame such that there exists a one-to-one correspondence between the bonding pads and the second lead frames. Sutardja does not teach for each second lead frame, there is exactly one bonding pad, and vice-versa. Since Sutardja teaches many more bonding pads than lead frames, Sutardja does not teach that there exists a one-to-one correspondence between the bonding pads and the first lead frames as well as between the bonding pads and the first lead frames. As such claims 33 and 34 are patentably distinguished from Sutardja. Reconsideration of claims 11, 19, 33, and 34 is therefore respectfully requested.

2. Introduction to new claims 35 and 36:

New claim 35 recites that each bonding pad of the chip has a corresponding first lead frame. Furthermore, each bonding pad is connected to one of the package substrate and the corresponding first lead frame with the other of the package substrate and the corresponding lead frame remaining unconnected. In this way, each bonding pad has two types of bonding options. The package substrate and the first lead frame have logically opposite voltage levels, so the bonding pad can have two distinct bonding options by connecting to one of the package substrate and the first lead frame and leaving the other unconnected. New claim 35 is fully supported in Figure 6 of the instant application as well as paragraphs [0021] to [0023] of the specification. No new matter is added. And, unconnected bonding options are not disclosed in cited prior arts.

Since Sutardja does not teach that each bonding pad is connected to one of the package substrate and the corresponding first lead frame with the other of the package substrate and the corresponding lead frame remaining unconnected, Sutardja does not teach all of the limitations of new claim 35.

New claim 36 recites a method of packaging two identical chips to different ICs, for

example, ICs with different functionality. The method includes providing identical package substrates respectively for the two chips and mounting the chips on their respective package substrate. Each package substrate has a plurality of first lead frames, and each bonding pad of each chip has a corresponding lead frame. One of the chips has
5 some of its bonding pads connected to its corresponding package substrate, whereas the other chip has identical bonding pads connected to its corresponding first lead frame. In this way, functionality of ICs can be changed without changing design and structure of package substrate/lead frames.

10 On the other hand, Sutardja does not teach the method steps recited in step 36. Sutardja does not teach or suggest connecting bonding pads of one chip to its corresponding package substrate while connecting bonding pads of the other chip to their corresponding first lead frames. Therefore, claim 36 is patentably distinguished from Sutardja. Acceptance of new claims 35 and 36 is respectfully requested.

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In view of the claim amendments and the arguments in favor of patentability, applicant respectfully requests that a timely Notice of Allowance be issued in this case.

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Sincerely yours,



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10 Note: Please leave a message in my voice mail if you need to talk to me. (The time in D.C. is 12 hours behind the Taiwan time, i.e. 9 AM in D.C. = 9 PM in Taiwan.)